

**NATIONAL INSTITUTES OF HEALTH
WARREN GRANT MAGNUSON CLINICAL CENTER
NURSING DEPARTMENT**

Standards of Practice: Care of the Patient Pre and Post Cerebral and Spinal Angiography

I. Assessment

A. Pre-Procedure

1. Temperature, pulse, respirations, blood pressure, neurological, respiratory, and circulatory assessment.
2. History of allergies and/or sensitivity to iodine or shellfish products or other contrast media. Assess patient need for pre-procedure medications if allergy exists.
3. Need for indwelling urinary drainage catheter.
4. Patient understanding of procedure and post procedure interventions and limitations.
5. History of renal or hepatic dysfunction.

B. Post-Procedure

1. Monitor and document the following every 15 minutes x4, every 30 minutes x4, hourly x4, every 4 hours x 2, then every 8 hours for a 48 hour period:
 - a. Pulse, respirations, blood pressure.
 - b. Bilateral pedal pulses
 - c. Bilateral lower extremities:
 - 1) Color
 - 2) Sensation
 - 3) Capillary refill
 - 4) Temperature
 - 5) Mobility of toes
 - d. Insertion site for any swelling, bleeding or hematoma.
 - e. Level of consciousness and mental status.
 - f. Pupil size and reaction and extraocular movements.
 - g. Motor strength.
 - h. Presence of and degree of discomfort at insertion site.
2. Monitor temperature every 2 hours x 4, then every 8 hours for 48 hours.
3. Monitor urinary function:
 - a. Voids within 8 hours of procedure or urinary catheter removal.
 - b. Assess for urinary retention.

II. Intervention

A. Pre-Procedure

1. Complete Pre-Procedure Checklist.
2. Mark bilateral pedal pulses.

3. Ensure: informed consent has been obtained prior to sedation administration.

B. Post-Procedure

1. Maintain patient on bed rest for a total of 8 hours post procedure.
2. Patient must remain flat in bed for the first 2 hours post procedure.
3. Patient may have 15 to 20 degree incline to head of bed after the first 2 hours post procedure.
4. Maintain affected leg straight in bed for 8 hours post procedure.
5. Record intake and output for 24 hours post procedure.
6. If oozing of blood is observed, apply digital pressure over the insertion site for a minimum of 5 minutes and notify the physician.
7. If a hematoma develops or spurting of blood is observed, hold direct forceful pressure over insertion site for a minimum of 20 minutes and notify the physician.
8. Encourage patient to drink at least 2 liters during the first 6 to 8 hours post procedure (unless contraindicated). Children's fluid intake needs will be determined by the Pediatric Fluid Worksheet. Children need to be alert and fully awake before resuming oral intake.
9. Instruct patient regarding post procedure plan of care.
10. Notify physician immediately if any complications are observed.
11. Provide and review with patient the document, Arterial Line Discharge Instructions. (See addendum).

III. Documentation

The following will be documented in the MIS or the Critical Care Flow Sheet:

- A. Pre and post procedure assessments.
- B. Pre and post procedure nursing interventions.
- C. Patient response to procedure.
- D. Intake and output post procedure.
- E. Patient education and patient response.

IV. References

1. Barker, E. (1994). Neuroscience nursing. St. Louis: Mosby.
2. Hickey, J. (1997). The clinical practice of neurological and neurosurgical nursing. (4th ed.). Philadelphia: J.B.Lippincott.
3. Kozier, B., Blais, K., Johnson, J. Y. & Temple, J. S. (1993). Special studies. In B. Kozier, G. Erb, K. Blais, J.Y. Johnson, & J.S. Temple (Eds.), Techniques in clinical nursing. (4th ed., pp. 368-373). Redwood City, California: Addison-Wesley.
4. Gold, D. J., & Mahre, M. (1993). Endovascular therapy of neurovascular malformations. Journal of Neuroscience Nursing, 25 (1), 38-44.

Approved:

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ADDENDUM

ARTERIAL LINE DISCHARGE INSTRUCTIONS

The study you have completed required the placement of a catheter into an **ARTERY** in your arm or leg. Therefore, it is **VERY** important for you to take some special precautions over the next 48 hours.

SPECIAL PRECAUTIONS

1. Avoid bending the arm, wrist, or leg where the catheter was placed for at least 8 hours.
2. **DO NOT PERFORM ANY STRENUOUS ACTIVITY WITH THE ARM OR LEG WHERE THE CATHETER WAS PLACED** (e.g., lifting over 10 pounds, sports, pulling, pushing, or grasping) for the next 48 hours. You can shower the day after the procedure.
3. If a pressure dressing is on the site, it is to remain in place for the next 4 hours. After you remove the dressing, carefully check the place where the catheter entered your arm, leg, or wrist. Once you have looked at the site, cover it with a Band-Aid. Keep the Band-Aid on the site until the next day.
4. Be aware of any signs of infection (including pain, tenderness, swelling, redness, or drainage) at the site. Also, be aware of any color changes, sensations of numbness, pins and needles or decreased strength in the hand or arm that had the catheter. Check for these symptoms upon removal of the dressing, and then twice a day for two days. If any of these symptoms occur, contact your **NIH PHYSICIAN and/or PERSONAL PHYSICIAN** immediately. This is an emergency.
5. Watch for bleeding from the site. If you see bleeding from the site, apply firm direct pressure as instructed. After 10 minutes, check for bleeding. If the bleeding has not stopped after 10 minutes, continue to hold pressure and go to the emergency room.
6. Over the next few days, you may note some bruising around the insertion site. This is a result of leakage of blood after the removal of the arterial catheter. Mild bruising is not unusual. If bruising is extensive, **CONTACT YOUR NIH PHYSICIAN and/or YOUR PERSONAL PHYSICIAN IMMEDIATELY.**
7. It is normal to have some discomfort at the site. If the discomfort increases or becomes severe, **CONTACT YOUR NIH PHYSICIAN and/or YOUR PERSONAL PHYSICIAN IMMEDIATELY.**

Phone Number of NIH Physician: _____